

Appln. No.: 10/003,190  
Amendment Dated: April 17, 2007  
Reply to Office Action of: January 18, 2007

MTS-2530US1

**Remarks/Arguments:**

Applicants' disclosure is directed to a lens containing an aperture. In the exemplary embodiment described in Applicants' specification, the lens has an aperture that has two openings. The first opening is for passing an advancing optical beam from a light source headed toward a disk and the second opening is for passing a returning optical beam returning from the disk. The first opening does not touch the lens' central axis. The second opening occupies an area that includes a region that is symmetrical with the first opening about the central axis of the lens.

Claims 12 and 21 have been allowed. Claims 9-11, 15 and 18-19 stand rejected under 35 U.S.C. § 102(e) as anticipated by Komma et al. (U.S. Patent No. 5,815,293). Claims 9, 10, 13-14 and 16-20 stand rejected under 35 U.S.C. § 102(e) as anticipated by Mukai et al. (U.S. Patent No. 5,995,286). It is respectfully submitted, however, that the claims are patentable over the art for the reasons set forth below.

Komma discloses a compound objective lens made up of a hologram lens and an objective lens. The hologram lens transmits a part of the incident light, without any diffraction, to form a beam. It diffracts the remaining part of the incident light to form a beam of first-order diffracted light. The objective lens converges the transmitted light.

Mukai discloses an optical system having a diffractive optical element. The optical element has a diffractive optical surface that allows the optical element to act as a lens as a result of light rays being deflected by the diffractive optical surface.

Applicants' invention, as recited by claim 9, includes a feature which is neither disclosed nor suggested by the art of record, namely:

...an aperture having a first opening and a second opening...

...said first opening does not include a central axis of said lens,

...said second opening includes a region which is symmetrical with said first opening about said central axis of said lens...

This means that the two openings are located opposite each other with respect to the lens' central axis. As shown in Fig. 11, for example, light beam 135M represents a region which is symmetrical with said first opening 111 about said central axis of said lens. Second opening 134 includes the region represented by light beam 135M. This feature is found in the originally filed application in at least Figs. 1 and 11. No new matter has been added.

Komma discloses a hologram lens. As shown in Fig. 15A, Komma's hologram lens contains four similarly-sized diffraction regions 33A-D. The diffraction regions are located in an opening formed around the outer perimeter of the hologram lens. The hologram lens further includes an opening in the center of the lens 32A which includes a grating.

Mukai discloses a diffractive optical element of an optical system. The Examiner argues that Fig. 10 shows a first opening (Region 3) and a second opening (central). As shown, Region 3 does not include the central axis 5. The central region, read as the region immediately surrounding central axis 5, includes central axis 5.

Komma and Mukai are both different because Applicants' apertured lens has two openings. The first opening 11 does not include the central axis of the lens. The second opening 134 includes a region (e.g. region represented by light beam 135M) which is symmetrical with the first opening 111 about the central axis of the lens. Komma's hologram lens, on the other hand, has an opening 32A that includes the central axis and an opening (33A-D) that does not include the central axis. However,

Appln. No.: 10/003,190  
Amendment Dated: April 17, 2007  
Reply to Office Action of: January 18, 2007

MTS-2530US1

the opening 33A-D does not include a region which is symmetrical with opening 32A about the central axis of the lens. Further, Mukai does not disclose a region which is symmetrical with the central region about the central axis 5.

It is because Applicants include the feature of an aperture having a first opening and a second opening...said first opening does not include a central axis of said lens, said second opening includes a region which is symmetrical with said first opening about said central axis of said lens, that the following advantages are achieved. Namely, this feature permits passage of both an advancing optical beam and a returning optical beam even if the disk is tilted by the advancing optical beam. Therefore, even if the disk tilts, causing a return beam to fall, most of the returning optical beam passes through without reflecting back.

Accordingly, for the reasons set forth above, claim 9 is patentable over the art of record.

Claims 11 and 13-20 include all the features of claim 9 from which they depend. Thus, claims 11 and 13-20 are also patentable over the art for the reasons set forth above.

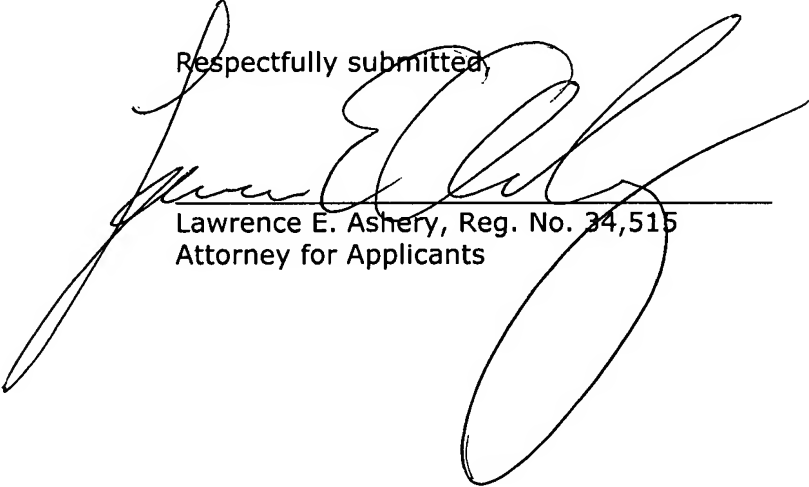
In claim 9, the language has been amended to overcome the indefiniteness rejection with respect to claims 9, 11 and 13-20.

Appln. No.: 10/003,190  
Amendment Dated: April 17, 2007  
Reply to Office Action of: January 18, 2007

MTS-2530US1

In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,

  
Lawrence E. Ashery, Reg. No. 34,515  
Attorney for Applicants

DK/dk/fp

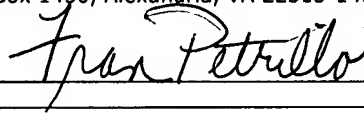
Dated: April 17, 2007

P.O. Box 980  
Valley Forge, PA 19482  
(610) 407-0700

The Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. **18-0350** of any fees associated with this communication.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

April 17, 2007



139882